## **ASCO** abstract

Risk-based care in survivors of childhood cancer: A report from the Childhood Cancer Survivor Study (CCSS)

Paul Nathan, Mark Greenberg, Kirsten Ness, Martin Mahoney, James Gurney, Melissa Hudson, Wendy Leisenring, Sarah Donaldson, Leslie Robison, Kevin Oeffinger

**Background:** Childhood cancer survivors are at significant risk of morbidity as a result of their therapy. Thus, they require regular medical follow-up focused on their specific long-term risks. We examined the frequency and type of care received by a cohort of adult survivors of childhood cancer and examined the predictors of the receipt of appropriate risk-based care.

Methods: Eligible subjects were members of the CCSS, a multi-institutional study of patients who have survived at least 5 years after being diagnosed with childhood cancer between 1970 and 1986. Participants completed a baseline survey and a subsequent survey on health care contact within the preceding 2 years. Contact was classified hierarchically as general care, cancer-related care, basic risk-based care and optimal risk-based care. Optimal risk-based care was assessed only in patients whose therapy is associated with a substantial risk of cardiac disease (≥300 mg/m² of an anthracycline, or any anthracycline plus chest radiation) or breast cancer (females who received chest radiation who are ≥27 years). Univariate and multivariable analyses were performed to assess associations between demographic/treatment variables and health care outcomes using logistic regression models.

**Results:** The health care questionnaire was completed by 8448 survivors. Median age (range) at diagnosis was 6.8 (0-21.0) years and at assessment was 31.4 (17.5-54.1) years. 87% reported general medical contact, 31% cancer-related care and 12% basic risk-based cancer care. Amongst patients at increased risk of cardiac disease (N=1798) or breast cancer (N=852), only 28% reported receiving an echocardiogram and 49% a mammogram, respectively. Patients without health insurance (odds ratio [OR]=2.22, 95% confidence interval [CI]=1.56-3.13, p<0.0001 by Wald statistic), males (OR=1.19, 95% CI=1.03-1.37, p=0.02), younger patients (OR=1.03, 95% CI=1.02-1.04, p<0.0001) and those who perceived their health as good/excellent (OR=1.37, 95% CI=1.13-1.65, p=0.001) were at increased risk of not having received basic risk-based care.

**Conclusions:** Despite a significant risk of late effects after cancer therapy, the majority of adult survivors of childhood cancer do not receive appropriate risk-based health care.